

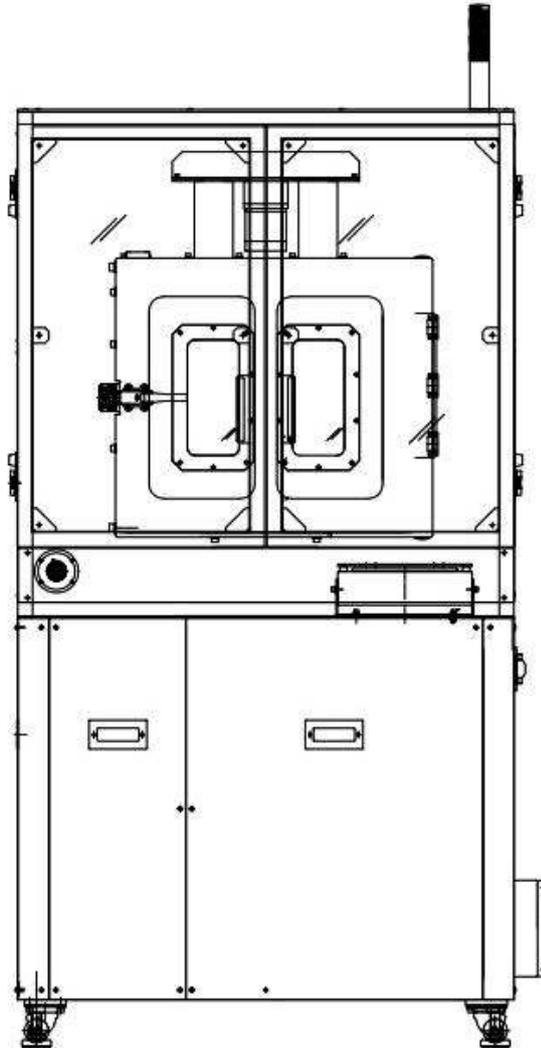
THINKY

Vacuum Model Automatic Syringe Charger

ARC-600TWIN

EX- 4703

INSTRUCTION MANUAL



THINKY CORPORATION

For safety, READ and understand this manual thoroughly before operation or maintenance of this system. Operation or maintenance of this system without reading this manual is strictly forbidden.

Keep this manual handy for easy reference at any time.

Table of Contents

CHAPTER 1 INTRODUCTION	1-1
1-1 Scope of System Warranty and Liability	1-2
1-1-1 System Warranty and Liability	1-2
1-1-2 Warranty and Liability for Software	1-5
1-1-3 Warrantee and Liability for Manual	1-5
1-2 Definitions of Intended Manual Readers	1-6
CHAPTER 2 SAFETY	2-1
2-1 Before Using the System	2-1
2-2 System Overview	2-2
2-2-1 Purpose of the system	2-2
2-2-2 Features	2-2
2-2-3 Specifications	2-2
2-3 DANGER, WARNING, and CAUTION in this Manual	2-3
2-3-1 Hazard level	2-3
2-3-2 Definitions of “serious injury” and “light injury”	2-4
2-3-3 Symbols	2-5
2-4 Hazard Warning Labels	2-6
2-4-1 Types of hazard warning labels	2-7
2-4-2 Hazard warning label locations	2-8
2-5 Work Area	2-9
2-6 Safety Measures	2-10
2-6-1 Safety precautions	2-10
2-6-2 Cautions against driving parts	2-12
2-6-3 Cautions against high voltage sections	2-12
2-6-4 Cautions against heavy objects	2-13

2-6-5	Cautions against dangers, toxics, and drastic matters	2-13
2-6-6	Safety interlock system	2-14
2-6-7	Signal tower	2-16
2-6-8	Lockout/Tagout	2-17
2-6-9	Work Clothes and Protective Gear	2-19
2-7	Cautions on Handling.....	2-20
2-8	Emergency measures.....	2-21
2-8-1	Emergency off (EMO) switch	2-21
2-8-2	Recovery from EMO.....	2-22
2-8-3	Emergency measures	2-24
2-9	Disposal of Waste Emitted during Work	2-26
2-10	Transfer and Disposal of the System	2-26
CHAPTER 3	SYSTEM CONFIGURATION AND UNIT NAMES.....	3-1
3-1	System front.....	3-1
3-2	System right side.....	3-2
3-3	Inside the chamber	3-3
CHAPTER 4	INSTALLATION.....	4-1
4-1	System Installation	4-1
4-1-1	Installation location.....	4-1
CHAPTER 5	AUTOMATIC OPERATION	5-1
5-1	Putting Power Supply on	5-1
5-2	Attachment of Parts.....	5-2
5-3	Recipe (Operating Condition) Setting.....	5-7
5-4	Automatic Operation Start	5-10
5-5	Recipe (Operating Condition) Confirmation	5-11
5-6	Display during Operation.....	5-12
5-7	After Charging Finished.....	5-13

CHAPTER 6	MANUAL OPERATION	6-1
6-1	Screen Operation (System Control).....	6-1
6-2	Utilities (Other Functions).....	6-3
CHAPTER 7	ERRORS AND ALARMS	7-1
7-1	Errors	7-1
7-1-1	How to recover from error during automatic operation	7-2
7-2	Alarms.....	7-6
CHAPTER 8	SYSTEM MAINTENANCE	8-1
8-1	Periodic inspection list	8-1
8-2	Daily Inspection	8-2
8-3	Cleaning of Inside of the System	8-2
8-4	Replacement of syringe holder	8-3
8-4-1	To remove syringe holder	8-3
8-4-2	Attachment of syringe holder	8-3
8-5	Inspection of Vacuum Pump	8-4
8-5-1	Replenishment of vacuum pump oil.....	8-4
8-5-2	Replacement of oil	8-6